WHAT IS CLAIMED IS:

1.   A method of object manipulation in a computer system comprises:

displaying a first three-dimensional object and a second three-dimensional object on a display, wherein the first three-dimensional object and the second three-dimensional object together have an associated first volume;

displaying a control indicator on the display, wherein the control indicator is associated with both the first three-dimensional object and with the second three-dimensional object;

receiving an offset for the control indicator in response to user input with a user input device; and

automatically scaling the first three-dimensional object and the second three-dimensional object in a first dimension by a first amount in response to the offset, and automatically scaling the first three-dimensional object and the second three-dimensional object in a second dimension by a second amount in response to the offset and a volume preservation factor to form a modified first three-dimensional object and a modified second three-dimensional object, wherein the modified first three-dimensional object and the modified second three-dimensional object together have an associated second volume;

wherein the second volume is determined in response to the volume preservation factor.

2.   The method of claim 1 further comprising:

automatically scaling the first three-dimensional object and the second three-dimensional object in a third dimension by a third amount in response to the offset and the volume preservation factor;

wherein the modified first three-dimensional object and the modified second three-dimensional object are also formed in response to scaling the first three-dimensional object and the second three-dimensional object in the third dimension.

3.   The method of claim 1 wherein the first volume is substantially similar to the second volume.

4.   The method of claim 1 wherein the second volume is less than the first volume.

5.   The method of claim 1 wherein the scaling of the first three-dimensional object and the second three-dimensional object in the first dimension comprises increasing a size of the first three-dimensional object and a size of the second three-dimensional object in the first dimension.

6.   The method of claim 5 wherein the scaling the first three-dimensional object and the second three-dimensional object in the second dimension comprises decreasing a size of the first three-dimensional object and a size of the second three-dimensional object in the second dimension.

7.   The method of claim 1

wherein the scaling of the first three-dimensional object and the second three-dimensional object in the first dimension comprises decreasing a size of the first three-dimensional object and a size of the second three-dimensional object in the first dimension; and

wherein the scaling the first three-dimensional object and the second three-dimensional object in the second dimension comprises increasing a size of the first three-dimensional object and a size of the second three-dimensional object in the second dimension.

8.   The method of claim 7 further comprising:

rendering the modified first three-dimensional object and the modified second three-dimensional object to form rendered objects; and

storing the rendered objects into a memory.

9.   A representation of frame of animation including the rendered objects determined in claim 8.

10.   A computer program product for a computer system including a processor and a display includes:

code that directs the processor to display a representation of a first object and a representation of a second object on the display, wherein the first object has an associated first volume, and the second object has an associated second volume;

code that directs the processor to determine a volume preservation factor;

code that directs the processor to associate the first object and the second object;

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code that directs the processor to receive an indication of a first modification value for the first object and the second object in a first dimension;

code that directs the processor to modify a size of the first object and a size of the second object in the first dimension in response to the first modification value;

code that directs the processor to determine a second modification value for the first object and the second object in a second dimension in response to the first modification value, and to the volume preservation factor;

code that directs the processor to modify a size of the first object and a size of the second object in the second dimension in response to the second modification value; and

code that directs the processor to display a representation of the first object after modification and the second object after modification on the display;

wherein the first object after modification is associated with a first modified volume;

wherein the first modified volume is determined in response to the volume preservation factor; and

wherein the codes reside on a tangible media.

11. The computer program product of claim 10

wherein the second object after modification is associated with a second modified volume;

wherein the first volume is approximately equal to the first modified volume; and

wherein the second volume is approximately equal to the second modified volume.

12. The computer program product of claim 11 wherein the volume preservation factor indicates full volume preservation.

13. The computer program product of claim 10

wherein the volume preservation factor indicates less than full volume preservation; and

wherein the first modified volume is less than the first volume.

14. The computer program product of claim 10

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wherein code that directs the processor to modify the size of the first object and the size of the second object in the first dimension comprises code that directs the processor to increase the size of the first object and the size of the second object in the first dimension in response to the first modification value; and

5   wherein code that directs the processor to modify the size of the first object and the size of the second object in the second dimension comprises code that directs the processor to decrease the size of the first object and the size of the second object in the second dimension in response to the second modification value.

15.   The computer program product of claim 10

10   wherein code that directs the processor to modify the size of the first object and the size of the second object in the first dimension comprises code that directs the processor to decrease the size of the first object and the size of the second object in the first dimension in response to the first modification value; and

wherein code that directs the processor to modify the size of the first object 15 and the size of the second object in the second dimension comprises code that directs the processor to increase the size of the first object and the size of the second object in the second dimension in response to the second modification value.

16.   The computer program product of claim 16 wherein code that directs the processor to receive the indication of the first modification value for the first object and 20   the second object in the first dimension comprises code that directs the processor to receive an indication of a first modification value for the first object and the second object in a first dimension from a user input device selected from the group: keyboard, graphical input device, voice input.

17.   A graphical user interface for a computer system includes:

25   a display portion configured to display a representation of a first three-dimensional object and a second three-dimensional object, wherein the first three-dimensional object has an associated first volume, and wherein the second three-dimensional object has an associated second volume;

a control icon associated with the first three-dimensional object, wherein a 30   user can specify a modification to the first three-dimensional object in a first dimension via the control icon; and

wherein the display portion is also configured to display a representation of a modified first three-dimensional object, wherein the modified first three-dimensional object comprises the first three-dimensional object that is modified in the first dimension in response to the modification and that is modified in a second dimension in response to the

5   modification and to a volume preservation value.

18.   The graphical user interface of claim 17 further comprising a display portion configured to display a currently selected volume preservation value.

19.   The graphical user interface of claim 17

wherein the control icon is also associated with the second three-dimensional

10   object, wherein the user can specify a modification to the second three-dimensional object in a first dimension via the control icon; and

wherein the display portion is also configured to display a representation of a modified second three-dimensional object, wherein the modified second three-dimensional object comprises the second three-dimensional object that is modified in the first dimension

15   in response to the modification and that is modified in the second dimension in response to the modification and to the volume preservation value.

20.   The graphical user interface of claim 19

wherein the modification to the first three-dimensional object in the first dimension comprises a modification selected from the group: lengthening, shortening; and

20   wherein the modification to the first three-dimensional object is in the second dimension comprises a modification respectively selected from the group: shortening, lengthening.

21.   The graphical user interface of claim 19 wherein the modified first three-dimensional object comprises the first three-dimensional object that is modified in the

25   first dimension in response to the modification, that is modified in a second dimension in response to the modification and to the volume preservation value, and that is modified in a third dimension in response to the modification and to the volume preservation value.